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Conference Faculty, Session Chairs, and Invited Speakers

Chairs

Noriaki Emoto, MD PhD, is a Professor at the Department of Internal Medicine at Kobe University Graduate School of Medicine and at Kobe Pharmaceutical University. After his residency as a cardiologist in Kobe University Hospital, Japan, he conducted his graduate studies and postdoctoral fellowship under the supervision of Dr. Masashi Yanagisawa in Dallas, Texas. He won the Louis N. Katz Basic Science Research Prizes of the American Heart Association in 1994 for the molecular identification and characterization of endothelin-converting enzymes, ECE-1 and ECE-2. He moved back to Kobe, where he leads his own laboratory as a physician–scientist. His group is staffed by two medical associate professors, two postdoctoral fellows and medical Ph.D. students from various countries. He is in charge of the pulmonary hypertension program in Kobe University Hospital. His major research interest is the translational research of endothelin.Noriaki Emoto is Guest Editor of the Proceedings of the Thirteenth International Conference on Endothelin, *Endothelin XIII*

Takashi Miyauchi, MD PhD, is a Professor of Cardiology (2003–present), Faculty of Medicine, University of Tsukuba, Tsukuba, Japan. He graduated from the University of Tsukuba Medical School (1983, MD), and also from the Graduate School of University of Tsukuba (1990, Ph.D.). He is a cardiologist who is also familiar with basic sciences of pharmacology, molecular biology, and physiology. The main theme of his research is the investigation of the physiological and pathophysiological roles of vasoactive peptides including endothelin in the cardiovascular system and diseases such as hypertension, pulmonary hypertension, and heart failure. He published over 200 manuscripts in Lancet, Nature, Circulation, Circulation Research, Hypertension, American Journal of Physiology, etc. Currently, he works as a Cardiologist (Professor) at Tsukuba University Hospital, and also works at the Life Science Center of Tsukuba Advanced Research Alliance (TARA) at the University of Tsukuba.Takashi Miyauchi served as Guest Editor of the Conference Proceedings of the Eighth International Conference on Endothelin (*Endothelin XIII*) held in Tsukuba, Japan (Chair of ET-8: Katsutoshi Goto).

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Honorary Chairs

Tomoh Masaki, MD PhD, graduated from the Faculty of Medicine, University of Tokyo, in 1962. After finishing internship training, he started his career with studies on structural proteins of muscle at Setsuro Ebashi's laboratory. Masaki established alpha actinin as a new protein of muscle and also found M-protein, and new protein of muscle, during the late 1960s and early 1970s. He also demonstrated the existence of several types of myosin, troponin, and or alpha actinin in different types of muscles, and that these types of muscle protein change during differentiation of muscle. The whole primary sequence of several muscle proteins, including smooth muscle myosin heavy chain, was determined in his laboratory. Masaki was promoted to Professor of Pharmacology, Institute of Basic Medical Sciences, University of Tsukuba in 1975, and moved as Professor of Pharmacology, to the Faculty of Medicine, Kyoto University, in 1991. During this period, he focused mostly on the investigation of smooth muscle. In 1987 to 1990, a potent endothelial vasoconstrictor peptide, endothelin, and its receptor were discovered in his laboratory in Tsukuba. In 1997, an endothelial receptor of oxLDL (LOX-1) was found in his laboratory at Kyoto. These vasoactive factors are thought to play important roles in physiology and pathophysiology of vascular beds, therefore many investigators in the world are now interested in research about this, and new drugs have been developed from his discoveries. In 1997, Masaki became Director of the Research Institute of the National Cardiovascular Center. In 2003, he assumed the position of President at Osaka Seikei University. In 2007, Masaki was appointed Professor at Tokyo Women's Medical University from where he retired in 2009. Professor Masaki currently lives in Tokyo and will be celebrating his 80th birthday in October of 2014.

Katsutoshi Goto, PhD, is a Professor Emeritus of the University of Tsukuba, Tsukuba, Japan. He was educated at the University of Tokyo and at West Virginia University Medical Center, USA. He was a Professor of Pharmacology at the Institute of Basic Medical Sciences, University of Tsukuba. He was a member of the team of the discovery of endothelin in 1988. After working as a Professor of the University of Tsukuba, he also became the Provost of Graduate School of Comprehensive Human Sciences, University of Tsukuba. He has been a councilor of the Japanese Pharmacological Society

from 1977 and a member of the American Society for Pharmacology and Experimental Therapeutics and Federation of American Societies for Experimental Biology from 1988. His fields of research are pharmacology, molecular biology, and physiology of the cardiovascular systems. The main theme of his research is the analysis of the physiological and pharmacological activity of peptides including endothelin. From this work, he has written more than 200 papers. He was the chairman of the Eighth International Conferences on Endothelin (ET-8) in 2003 at Tsukuba, Japan. After finishing of his Professorship at the University of Tsukuba, he became the Director of JST Innovation Satellite Ibaraki, Tsukuba, Japan. Currently, he is a Professor Emeritus of the University of Tsukuba, Tsukuba, Japan.

Paul M. Vanhoutte, MD PhD, FAHA, is a Chair Professor in the Department of Pharmacology and Pharmacy of the Li Ka Shing Faculty of Medicine of the University of Hong Kong. He obtained his M.D. degree at the University of Gent, Belgium. He has been Professor of Pharmacology at the University of Antwerp, the Mayo Clinic, Rochester MN, and Baylor College of Medicine, Houston TX. From 1992 to 2002, he was Director of Discovery Research at Servier near Paris in France. Dr. Vanhoutte is Doctor honoris causa of the Universities of Gent, Antwerp, Zurich, Montréal and Strasbourg, of the RMIT University in Melbourne, Australia, and of the Gr. T. Popa University in Iasi, Romania. Dr. Vanhoutte is a Highly Cited Researcher (ISI) in three categories: Biology & Chemistry, Pharmacology, and Clinical Medicine. Dr. Vanhoutte is Past Chair of the Third International Conference on Endothelin (ET-3) held at Housten in 1993, Past Honorary Chair of the Sixth International Conference on Endothelin (ET-6) held in Montréal, Canada, in 1999, Past Honorary Chair of the Ninth International Conference on Endothelin (ET-9) held in Park City, Utah, in 2005, and Past Honorary Chair of the Twelfth International Conference on Endothelin (ET-12) held in Cambridge, UK, in 2011.

Masashi Yanagisawa, MD PhD, is an Investigator of the Howard Hughes Medical Institute (HHMI) and Patrick E. Haggerty Distinguished Professor of Molecular Genetics at the University of Texas Southwestern Medical Center at Dallas. Since 2010, he doubles as Professor and Director of the International Institute for Integrative Sleep Medicine at the University of Tsukuba. Dr. Yanagisawa discovered endothelins, their receptor and processing enzymes, and demonstrated their roles in the embryonic development. Later he also discovered the orexins and their receptors, molecules that regulate sleep and wakefulness. Promising therapeutic applications have emerged from both of his lines of exploratory research. Dr. Yanagisawa is a member of the US National Academy of Sciences, and member of the International Advisory Board of the International Conferences on Endothelin. He was honorary chair of the Tenth International Conference on Endothelin (ET-10) held in Bergamo, Italy, in 2007, the Eleventh International Conference on Endothelin (ET-11) held in Montréal, Canada, in 2009, and the Twelfth International Conference on Endothelin (ET-12) held in Cambridge, UK, in 2011.

Local Organizing Committee and International Scientific Advisory Board Members

Dennis L. Andress, MD, is the Senior Medical Director for Renal Development with Abbvie. Prior to his employment at Abbvie, he was Clinical Professor of Medicine and Director of the Renal Dialysis Unit at the Division of Nephrology, University of Washington, Seattle, WA. Dr. Andress contributed basic and clinical research discoveries related to complications of chronic kidney disease and end-stage renal failure with over 100 publications in peer-reviewed journals. His research was supported by grants from the National Institutes of Health and the Northwest Kidney Foundation. His current interest is in drug development for diabetic nephropathy particularly as it relates to the endothelin system and to the selective ETA receptor antagonist, atrasentan.

Kazutaka Aonuma, MD PhD, is the Professor and Director of Tsukuba University Hospital

Education

1971–1977 University of Yamaguchi, School of Medicine, Yamaguchi; M.D.

1977–1982 Post Graduate School of Medicine, Tokyo Medical and Dental University, Tokyo; Ph.D.

Postdoctoral Training

1982–1984 Fellowship in Cardiology, Miami Heart Institute, Miami Beach, Florida, USA.

Academic Appointment

1999–present: Visiting Professor of Cardiology, Department of Internal Medicine, Tokyo Medical and Dental University of Medicine, Tokyo, Japan

2001–present: Visiting Professor of Internal Medicine, St. Marianna University School of Medicine, Kanagawa, Japan

2002–present: Visiting Professor of Internal Medicine, Tokai University School of Medicine, Kanagawa, Japan

2006–present: Professor and Director of Cardiovascular Division, University of Tsukuba, Tsukuba, Japan

Board Certification:

Council Member of the Japanese Society of Electrocardiography

Council Member of the Japanese Heart Rhythm Society

Council Member of the Japanese Clinical Cardiac Electrophysiology Society

Council Member of the Japanese Circulation Society

Member of the American Heart Association

Editors of the Journal

Circulation Journal Associate Editor

Journal of Cardiology Associate Editor

Journal of Arrhythmia Editor in Chief

Anna Bagnato, PhD, has been a group leader in the Laboratory of Molecular Pathology at the Regina Elena National Cancer Institute of Rome, Italy, since 1998. She is the author of numerous articles published in leading international journals and book chapters and has coordinated cancer research grants by public and private agencies. Her research, defining many critical

activities of the endothelin axis in the development and the progression of cancer, in particular in ovarian carcinoma model, represents the translational basis leading to the introduction of novel targeted therapies in the ovarian cancer management. As a member of the Board of the Italian Cancer Society, Dr. Bagnato plays an active role in promoting cancer research and communicating science to the public.

Brian D. Cain, PhD, studied at the University of Colorado and the University of Illinois (Ph.D., 1983). While a postdoctoral fellow at Stanford University, he began a continuing study of the F1F0 ATP synthase. Dr. Cain joined the faculty of the University of Florida in 1988. He has chaired the Physical Biochemistry Study Section for the NIH, and the Bioenergetics Gordon Conference.

In collaboration with Dr. Charles Wingo and later Dr. Michelle Gumz (UF, Dept. of Medicine), the Cain laboratory has also investigated the molecular regulation of ion transport in the renal distal collecting duct. Microarray experiments showed high level induction of the *Edn1* gene in a collecting duct cell line (mIMCD-3) in response to aldosterone leading to our interest in endothelin. Hormone treatment resulted in binding of both the mineralocorticoid and glucocorticoid receptors to a hormone response element located in the 5′ regulatory region of the *Edn1* gene. Recently, the miRNA landscape of mIMCD-3 cells was determined by microarray analysis. Ongoing experiments are aimed at determining the mechanisms of miRNA regulation of *Edn1* expression.

Carmine Cardillo, MD, is a professor of Internal Medicine, head of a Division of Internal Medicine and chief of the Vascular Physiology Laboratory at the Catholic University Medical School in Rome, Italy. He received his M.D. and his fellowship in Internal Medicine from the Catholic University. He also served for almost 4 years as a Visiting Scientist at the Cardiology Branch, NHLBI, of the National Institutes of Health in Bethesda, MD, USA.

In addition to practicing and teaching, Dr. Cardillo has been involved for long time in research on the mechanisms of vascular dysfunction in patients with risk factors for cardiovascular disease. In particular, he has studied changes in the main endothelial homeostatic mechanisms, including the nitric oxide pathway and the endothelin system, in hypertension, diabetes and hypercholesterolemia. He has also investigated the determinants of impaired vasoactive properties of insulin in conditions like obesity and the metabolic syndrome. He has authored almost one hundred peer-reviewed articles on these topics.

Subrata Chakrabarti, MBBS, PhD, FRCPC, is a Professor and Chair of the Department of Pathology at the University of Western Ontario, London, Ontario, Canada. He also works as a pathologist at the London Health Sciences Centre biology. Dr. Chakrabarti investigates mechanisms of chronic diabetic complications and studies diabetic retinopathy, nephropathy and diabetic heart disease and has published extensively in this field. He has a long-standing interest in the role of endothelins in chronic diabetic complications and other diseases.

Martine Clozel, MD, Actelion Pharmaceuticals, Ltd, Allschwil, Switzerland Martine Clozel, a pediatrician specialized in neonatal intensive care, obtained her MD degree at Nancy University, France, and received further training in physiology and pharmacology from McGill University, Montreal, and the University of California, San Francisco. During her 11 years at F. Hoffmann-La Roche Ltd, she initiated the research project on endothelin and endothelin receptor antagonists (ERAs) which led to the discovery and clinical development of bosentan (Tracleer), tezosentan, clazosentan and macitentan. Her group has published over 150 peer-reviewed papers in the fields of endothelial function, endothelin and ERAs. In 1997 she was awarded the Hoffmann-La Roche Research Prize for her achievements in the field of endothelin research. In 1997 she co-founded Actelion Pharmaceuticals Ltd, where she is Senior Vice President and since 2009, Chief Scientific Officer. Martine Clozel is a member of the Scientific Editorial Board of *Science Translational Medicine*. In 2008, she was honored as "Chevalier dans l'Ordre de la Legion d'Honneur".

Michael R. Dashwood, PhD, obtained his Ph.D. in Physiology at the University of London in 1986 having previously been at the National Institute for Medical Research in London where his original research was investigating central sites of opioid induced analgesia and cardiovascular control. For the last 20 years his focus has shifted from brainstem regions involved in central cardiovascular control to the 'local' vascular effects of endothelium-derived nitric oxide and endothelin. These studies have generated a number of research papers, reviews and book chapters describing the potential involvement of these factors in diseases including atherosclerotic vascular disease such as critical limb ischemia and venous disease including vein graft failure.

Jo G. R. De Mey, PhD, is a Professor of Medical Molecular Pharmacology at the Institute of Molecular Medicine, University of Southern Denmark, and professor of Vascular Pharmacology at the Cardiovascular Research Institute Maastricht (CARIM) of Maastricht University, the Netherlands. He was trained as a zoologist (M.Sc.) and as a pharmacologist (Ph.D.) at the University of Antwerp. Before joining Maastricht University he headed a cardiovascular department in pharmaceutical industry focusing on therapeutic applications of natriuretic peptides. He is the author of more than 160 scientific articles covering early aspects of endothelium-dependent vascular reactivity, endothelial dysfunction in hypertension, endothelium dependent arterial remodeling in experimental models of heart failure and diabetes and, more recently, molecular pharmacology of ET-receptors and endogenous functional antagonists of ET-receptor function such as CGRP. He coordinates the cardiovascular research within the Dutch public–private partnership Top Institute Pharma that addresses among others "metalloproteases and novel targets in endothelial dysfunction".

Neeraj Dhaun, (PhD MBChB, to most as 'Bean') is a clinical and academic nephrologist in Edinburgh, Scotland. His clinical interests are immune-mediated renal disease especially vasculitis and high-risk renal transplantation. He jointly runs the South-East Scotland Vasculitis & Lupus Clinic. His research is both laboratory and clinical in nature and has focused on the vascular aspects of chronic kidney disease, particularly the role of ET-1.

Adviye Ergul MD PhD, FAHA, is a Professor of Physiology at the Georgia Health Sciences University in Augusta, GA. She received her Ph.D. in Biochemistry and Molecular Biology on a project related to endothelin-1 (ET-1) structure and function. Since then she has been interested in the physiology/pathophysiology of the ET system. She made the seminal observation that plasma ET-1 concentrations are much higher in African-American hypertensives which contributed significantly to our understanding of the ET system in salt-sensitive hypertension. She built a strong research career on the roles of ET and its receptors in diabetes-associated complications. She has published more than 100 scientific papers and her research has been continuously supported by the American Heart Association, American Diabetes Association, National Institutes of Health and Veterans Administration. Dr. Ergul is a Fellow of the *American Heart Association*.

Keiichi Fukuda, MD PhD, is a professor of Department of Cardiology, Keio University School of Medicine in Tokyo, Japan. One of his research interests was the role of endothelin on the cardiovascular development, especially its effect on cardiac sympathetic innervation. He discovered that cardiomyocyte-produced nerve growth factor (NGF) mediated cardiac sympathetic nerve innervation, and NGF production from cardiomyocytes was determined by autocrine/paracrine secreted endothelin I-mediated signals. Moreover, cardiac sympathetic nerve transdifferentiated to cholinergic neurons during heart failure via gp130 mediated signals, especially LIF. He is also interested in regenerative medicine, and developed various techniques for induction, purification, and transplantation of cardiomyocytes obtained from ES cell/iPS cells. He also investigated the disease model of iPS cells obtained from the patients with hereditary heart disease such as long QT syndrome and Brugada syndrome.

Adel Giaid, MD PhD, currently a Professor of Cardiology at the McGill University Health Centre in Montreal, Canada. He was of the pioneers who began to investigate the pathological role of endothelin in the cardiopulmonary system. Indeed, Dr. Giaid was the first to report the presence of endothelin in the fetal and adult nervous and respiratory systems. He then reported an association between the pathological characteristics of pulmonary artery disease (pulmonary hypertension) and expression of endothelin-1. Subsequently, he demonstrated increased expression of endothelin-1 in a number of diseased conditions such as pulmonary fibrosis, heart failure, atherosclerosis and pulmonary neoplasm.

Hunter C. Gillies, MD, is a Senior Director in clinical research at Gilead Sciences Inc., San Francisco. He spent the past 13 years in the pharmaceutical industry working on clinical drug development, primarily focusing on the cardiovascular effects of phosphodiesterase type 5 inhibitors (PDE5i) and endothelin receptor antagonists (ERA). For the past eight years has worked in the field of pulmonary hypertension including clinical research and trials in PAH and PH secondary to chronic lung disease. Currently his research focus involves clinical trials involving new pharmacological targets and exploring the potential for pharmacological synergy between PDE5i and ERAs. He has a number of peer reviewed publications on cardiovascular physiology and pharmacology, exercise physiology and the development of PD5i for cardiopulmonary disorders.

Anil Gulati, MD PhD, FCP, is a Professor of Pharmaceutical Sciences and Associate Dean for Research at the Midwestern University. He is a United States Fulbright Scholar 2008–2009 and winner of International Ranbaxy Research Award 2007. He obtained his M.D. in 1982 from King George's Medical College, Lucknow, India and became Diplomate American Board of Clinical Pharmacology (1992). He was awarded a Ph.D. in 1996 by Erasmus University Rotterdam, The Netherlands. He is a Fellow of the American College of Clinical Pharmacology. He has more than 265 peer reviewed publications and guided research of more than 70 graduate students and research fellows. Dr. Gulati has 21 patent applications (six issued patents) and has founded three companies. Medications developed by Dr. Gulati are undergoing clinical trials in the United States and India.

Ken-ichi Hirata, MD PhD, is a Professor of Cardiovascular Medicine at the Kobe University Graduate School of Medicine. His research has focused on atherosclerosis and coronary circulation. He is specifically interested in vascular biology, including inflammation, immune system and endothelial function to develop novel therapies for atherosclerotic diseases. Dr. Hirata is a member of Japanese Circulation Society, Japanese Atherosclerosis Society, ESC and the AHA.

Berthold Hocher, MD, studied medicine in Berlin and Heidelberg. He started his research career at the Department of Biochemistry at the Free University of Berlin where he also accomplished his Ph.D. In the following years he worked clinically in the field of internal medicine with the focus on endocrinology and nephrology. After clinical posts at the Benjamin Franklin University Hospital of the Free

University of Berlin and the Charite, he became senior consultant nephrologist and associated professor at the University Hospital Bern/ Switzerland. Thereafter, he worked in the pharmaceutical industry in pre-clinical and clinical drug development (Solvay Pharmaceuticals, Hannover, Germany and Roche, Basel, Switzerland). Currently he holds a full professorship at the University in Potsdam for experimental nutritional medicine and is a visiting professor at the Jinan University, Guangzhou, China. The main topics of his research group are fetal programming of cardiovascular diseases, exploration of novel targets for the treatment of diabetic complications focusing on diabetic nephropathy as well as biomarker research.

Satoshi Homma, MD PhD, is a Professor of Cardiovascular Medicine at the University of Tsukuba. His research interest, since the Ph.D. work in Tsukuba (1987–1991), has focused on the hemo-dynamic changes in microcirculation of visceral organs, influenced by some potent vaso-active substances such as endothelin, prostacyclin, phospho-diesterase inhibitor, nitroglycerine, CGRP, etc. After his clinical career that started at the National Cardiovascular Center in Osaka (1992–1998), he returned as a medical staff in the critical care unit here in the University of Tsukuba Hospital and has begun to develop the treatment of patients with pulmonary hypertension, considering the effects of the potent vaso-active substances on the patient body and its microcirculation. Dr. Homma is also interested in the quality of the hospital care. He is now involved in working as director of QARM (Quality Assurance and Risk Management) department at the University Hospital and as councilor of the Japanese Society of Quality and Safety in Healthcare.

Uichi Ikeda, MD PhD, is Professor and Chairman of the Department of Cardiovascular Medicine at Shinshu University School of Medicine in Matsumoto City, Nagano Prefecture. His research has focused on cardiac regeneration and angiogenesis. He is also interested in epidemiology, vascular function and cell biology, and therapeutics of peripheral artery disease. He has also published several reports concerning pathophysiological roles of endothelin in Takayasu's arteritis, valvular heart disease and coronary artery disease.

Hiroshi Ito, MD PhD, is the Professor of Cardiovascular and Respiratory Medicine, Akita University Graduate School of Medicine. He was also appointed as the Director of Akita University Hospital and the Vice President of Akita University. His research interest is the pathophysiology of heart failure, especially, focused on roles of neurohumoral factor in the mechanisms of heart failure. He is also involved in several clinical researches in heart failure. He is a committee board member of the Japanese Circulation Society, and member of several scientific societies related to cardiovascular diseases.

Hiroshi Ito, MD PhD, FACC, FESC is Professor of Cardiovascular Medicine at Okayama University Graduate School of Medicine in Okayama, Japan. He is an executive board member of the Japanese Circulation Society and of Japanese Pulmonary Circulation Society. He is going to be the chairman of 3rd annual scientific meeting of Japanese Pulmonary Circulation Society in 2014. He is the chairman of working group on "Indication and application of balloon pulmonary angioplasty to patients with chronic pulmonary thromboembolism" that is supported by the Japanese Circulation Society. His research interests include clinical application of echocardiography and development of therapeutic strategy of heart failure. In the field of pulmonary hypertension, he studies the mechanisms of right ventricular dysfunction associated with pulmonary hypertension with echocardiography.

Masaaki Ito, MD PhD, is Professor of Cardiology and Nephrology at Mie University Graduate School of Medicine and Physician-in-Chief of Cardiology in Mie University Hospital in Tsu, Japan. He has been working on the regulation of contractile cycle in vascular smooth muscle. He discovered the signal transduction regarding Ca^{2+} sensitization of smooth muscle contraction through Rho-kinase-mediated myosin phosphatase inhibition. He is also interested in clinical pharmacology in hypertension and coronary atherosclerosis. He is recently going to have research-activities focusing on clinical and basic research on pulmonary hypertension and right heart failure. Dr. Ito is a Fellow of Japanese College of Cardiology and the Japanese Society of Hypertension, and a member of the Japanese Circulation Society and the American Heart Association.

Yasuki Kihara, MD PhD, FJSIM, FACC, FACP, FESC

1987–1989, Instructor in Medicine, Harvard Medical School, Boston

1989–1993, Assistant Professor, Toyama Medical and Pharmaceutical University

1993–2004, Assistant (-2002) and Associate (-2004) Professor, Department of Cardiovascular Medicine, Kyoto University Graduate School of Medicine

2005–2007, Chairman, Department of Cardiovascular Medicine, Kobe General Hospital

2008–present, Professor and Chairman, Department of Cardiovascular Medicine, Hiroshima University Graduate School of Biomedical & Health Sciences

CheMyong Jay Ko, PhD, is an Associate Professor of the Department of Comparative Bioscience, College of Veterinary Medicine at the University of Illinois at Urbana-Champaign (UIUC). He graduated from the Seoul National University in Seoul, Korea, with a bachelor degree in Biology education in 1986. Dr. Ko taught Biology and General Science for a few

years at a junior high middle school before he entered a graduate school at the Seoul National University where studied Developmental Biology and Biology Education. In 1998, he graduated with a Ph.D. degree, and moved to United States to do a postdoctoral training at the University of Kentucky in the field of reproductive biology and molecular endocrinology. In 2002, he took an Assistant Professor position in the Department of Clinical Sciences and Department of Biology at the University of Kentucky. In 2011, he moved to the University of Illinois at Urbana Champaign to take his current academic position. His major research interests are in female reproductive biology.

Theofilos M. Kolettis, MD, after graduation from the German School of Athens, obtained his MD degree from Medical School, University of Athens in 1984 and his Ph.D. in 1991. He trained in Cardiology at the Edinburgh Royal Infirmary, U.K. and at the Athens General Hospital. He worked as a clinical research associate at the Department of Electrophysiology, Eastern Heart Institute, NJ, and as an attending physician at the Onassis Cardiac Surgery Center, Athens, Greece. He is currently a Professor in Cardiology at the University of Ioannina, Greece. Dr. Kolettis practices in the field of cardiac pacing and clinical electrophysiology. His research interests include the study of the pathophysiological effects of endothelin during myocardial infarction, focusing on ventricular remodeling and tachyarrhythmias.

Issei Komuro, MD PhD FAHA, FISHR, is a Professor of Medicine and Chairman of Cardiovascular Medicine Department, The University of Tokyo Graduate School of Medicine. After obtaining MD and Ph.D. from The University of Tokyo, he started postdoctoral fellowship at Harvard Medical School in 1989. He has become professor of Chiba University in 2001, of Osaka University in 2009 and of The University of Tokyo in 2012, and PI of CREST in 2011. His research interests are molecular mechanisms of heart failure, cardiovascular development and regeneration. He has published over 500 papers in peer-review journals and received many awards including Outstanding Investigator Prize from ISHR, Sato award from JCS and Balz award. He is an associate editor of Circulation Research and an editorial board member of Journal of Clinical Investigation, Arteriosclerosis Thrombosis and Vascular Biology, Cardiovascular Research and Journal of Molecular Cellular Cardiology.

Takeyoshi Kunieda, MD PhD FCCP, is a Professor of Medicine, International University, Health and Welfare, Clinical Medical Research Center, Kaken Hospital, Ichikawa, Chiba, Japan, and former Professor of Medicine, Keio University. Professor Kunieda graduated from Keio University, Tokyo, Japan in 1962 and completed Ph.D. from Keio University in 1968 and has been studying pulmonary circulation for more than 40 years, mostly involved in the study of pulmonary hypertension and pulmonary embolism at the National Cardiovascular Center, Osaka, and Keio University, and worked together with many specialized doctors for the treatment of pulmonary hypertension. He currently is a chairman of the Japanese Society of Pulmonary Hypertension Research.

Hiroki Kurihara, MD PhD, is a Professor of Molecular and Cellular Biology at the University of Tokyo Graduate School of Medicine. He contributed to the discovery of endothelin in 1988 and first reported endothelin-1 knockout mice in 1994. His present research interests are craniofacial and cardiovascular development and the involvement of neural crest cells. He also acts as a member of Institute for Biology and Mathematics of Dynamical Cell Processes (iBMath), the University of Tokyo, to promote a relationship between medicine and mathematics.

David Langleben, MD, is a Professor in the McGill University Faculty of Medicine, and former Chief of Cardiology of the Jewish General Hospital. He founded and directs the Center for Pulmonary Vascular Disease, the first pulmonary hypertension clinic in Canada. His research interests include lung vascular metabolism; behavior and function of lung vascular cells; vascular cell biology; epidemiology of pulmonary hypertension, and the development of new medications for pulmonary hypertension. His work has been supported by the Medical Research Council of Canada, The Canadian Institutes for Health Research, the Fonds de la Recherche en Sante du Quebec, the Heart and Stroke Foundations of Quebec and Canada, and the Quebec Lung Association.

Marilena Loizidou, PhD, a Senior Lecturer in the Division of Surgery and Interventional Science, UCL, UK. The division is situated on 4 different campuses and Marilena is Head of the Royal Free Campus. She originally trained in biochemistry (Canada) and pharmacology (UK). Her long term research has focused on epithelial–stromal interactions in cancer and translational cancer pharmacology. In colorectal cancer, she investigated tumorigenic actions of endothelin-1. Her group systematically delineated anti-cancer mechanisms of endothelin A receptor antagonists, mainly through cancer–stroma interactions. The antagonists are now in colorectal cancer trials. She currently leads the cancer nanotechnology group which uses nanoparticles and nanoformulations to improve cancer imaging and drug efficacy. Her current research focuses on (a) novel drug nanoformulations, including photochemical internalization and (b) using biofunctionalized (targeted) nanoparticles for theranostics. Dr. Loizidou is also the Director of the MSc in Surgical Science and Co-Director and Founder of the MSc in Nanotechnology and Regenerative Medicine — cited in Nature as a most innovative course, 2009. Dr. Loizidou is a council member of the Society of Academic and Research Surgery, UK and was voted as UCL Academic Role Model (2013).

Koji Maemura, MD PhD, is a Professor at the Department of Cardiovascular Medicine, Nagasaki University Graduate School of Biomedical Sciences, and Chief of Cardiology of Nagasaki University Hospital, Nagasaki City, Japan. He graduated from Faculty of Medicine, the University of Tokyo in 1986. After trained as a resident and clinical fellow in Tokyo University Hospital, he started research under the supervision of Hiroki Kurihara, MD, Ph.D. He was involved in the projects regarding *Edn1* deficiency mice and *Edn1* overexpressing mice. His present major interests are cardiovascular medicine, vascular biology, atherosclerosis, and chronobiology. He is an executive board member of The Japanese Vascular Biology and Medicine Organization, and an editorial board member of Arteriosclerosis Thrombosis Vascular Biology.

Janet Maguire, PhD, is a Senior Research Associate in the Clinical Pharmacology Unit, University of Cambridge and a Fellow of Queens' College, Cambridge. She is a member of the BHF Receptor Research Group whose focus is the pharmacology of established and novel G-protein coupled receptors in the human cardiovascular system and who have particular expertise in the endothelin peptides and their receptors. Dr. Maguire has co-authored fifty eight peer reviewed papers, eight book chapters and seventeen reviews, and is Editor and contributor of a volume, 'Peptide Research Protocols: Endothelin' for Humana Press. She is also involved in undergraduate and graduate teaching in pharmacology, supervising pre-clinical medical and veterinary students, is a Wellcome Trust/MRC 4-year Ph.D. program Principal Investigator and a member of the International Union of Pharmacology Receptor Nomenclature Sub-Committee on Endothelin Receptors.

Hiromi Matsubara, MD PhD, is currently the Director of Department of Clinical Science and Division of Cardiology at National Hospital Organization Okayama Medical Center, Okayama, Japan. After receiving his MD from Okayama University Medical School and finishing his residency in internal medicine at the National Okayama Hospital, he began his fellowship at the National Cardiovascular Center, Osaka, Japan in 1990. He became an Assistant Professor at the Department of Physiology II at Okayama University Graduate School of Medicine and Dentistry in 1993. He then became an Assistant Professor of Department of Cardiovascular Medicine in 1997 and again promoted in 2000 to the Associate Professor of Cardiovascular Medicine. He then became the Director of Division of Cardiology at National Hospital Organization Okayama Medical Center and he also serves as the Director of Department of Clinical Science since 2010.

His investigative interests have focused on clinical and physiologic aspects of pulmonary hypertension. He has made Division of Cardiology at National Hospital Organization Okayama Medical Center as one of the largest pulmonary hypertension center in Japan.

Yasuo Matsumura, PhD, is a Professor of Pharmacology at Osaka University of Pharmaceutical Sciences (Takatsuki, Japan) since 2002. Professor Matsumura is a member of council of the Japanese Pharmacological Society, Japanese Society for Circulation Research, Nitric Oxide Society of Japan, etc. He was a member of Editorial Staff (2007–2010) of Folia Pharmacologica Japonica, an official journal of The Japanese Pharmacological Society.He obtained his Ph.D. degree (1987) at the Osaka City University Medical School. His main areas of expertise, research and work include renal, heart, and circulatory pharmacology, health food science, and vascular biology.

Soichi Miwa, MD PhD, is a Professor of the Department of Cellular Pharmacology, Hokkaido University Graduate School of Medicine in Sapporo, Japan. He was an associate of Professor Tomoh Masaki in the Department of Pharmacology, Kyoto University Graduate School of Medicine in Kyoto, Japan, from 1992 to 1997, and a Secretary General of the Fifth International Conference on Endothelin (ET-5; President, Tomoh Masaki) held in Kyoto, Japan. His research for over two decades has focused on intracellular Ca^{2+} signaling mediated by endothelin receptor, especially in terms of receptor-operated Ca^{2+} channels and store-operated Ca^{2+} channels. He is also involved in a research on regulatory mechanisms for G-protein coupled receptor (GPCR) recycling/degradation using ET_A and ET_B receptors as a model system. His immediate hope is to clarify the molecular mechanism for the different fates of ET_A and ET_B receptors following ET stimulation. Recently he is also interested in a pathophysiological role of ET system in the development of insulin resistance as a major cause of type 2 diabetes mellitus.

Shin-ichi Momomura, MD is a Professor of Cardiovascular Medicine and also the President of Jichi Medical University Saitama Medical Center. His specialty is heart failure and had participated in publishing Japanese Guidelines for Acute Heart Failure as well as Japanese Guidelines for Chronic Heart Failure. His main interest in heart failure research was cardiac function in diseased heart. However, recently it is shifting to sleep disordered breathing and cardiovascular disease. He was appointed as Chairman of the Committee of Japanese Guidelines for the Diagnosis and Treatment of Sleep Disordered Breathing Associated with Cardiovascular Disease which was published in 2010. He is now conducting a randomized study to evaluate the effect of adaptive servo-ventilation on left ventricular function in patients with heart failure due to left ventricular systolic dysfunction. He is the President of the 2013 Annual Scientific Meeting of the Japanese Heart Failure Society held in Saitama City in November.

Toyoaki Murohara, MD PhD, FESC is a Professor at the Department of Cardiology, Nagoya University Graduate School of Medicine. He obtained M.D. and Ph.D. degrees at Kumamoto University School of Medicine. Hecompleted a Postdoctoral Fellowship at Thomas Jefferson University in 1993, followed by the Department of Cardiology, St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, in

1996. His research interests are vascular biology for the prevention of atherosclerosis and regeneration therapy for ischemic diseases. He is an Associate Editor of Circulation Journal and Hypertension Research, and an Editorial Board Member of Circulation Research, Journal of the American College of Cardiology, Journal of Molecular and Cellular Cardiology and ATVB.

Norifumi Nakanishi, MD PhD, is a Director of Endowed Department of Pulmonary Hypertension and Pulmonary Vascular Medicine, National Cerebral and Cardiovascular Center Research Institute, Osaka, Japan. His clinical and research interests are in pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension. Dr Nakanishi is a councilor of the Japanese Society for Adult Congenital Heart Disease and serves as an executive board member of Japanese Pulmonary Hypertension Society. He is also the main editor of Guideline for Treatment of Pulmonary Hypertension of the Japanese Circulation Society.

Kazuwa Nakao, MD PhD, is a Professor at the Medical Innovation Center, Kyoto University Graduate School of Medicine. Prior to holding the current title, he was Professor and Chairman of the Department of Medicine and Clinical Science, Kyoto University Graduate School of Medicine (Kyoto, Japan) for twenty years. He was also Director of Kyoto University EBM Research Center, Kyoto University Translational Research Center, and Vice Dean of Kyoto University Graduate School of Medicine. He has been engaged in Translational Research for natriuretic peptides (ANP, BNP and CNP) and leptin, has achieved clinical application of these hormones and has authored 925 English publications in the areas of Cardiovascular Endocrinology, and Metabolism and Obesity/Metabolic Syndrome. Dr. Nakao is the President of Japan Society for the Study of Obesity (JASSO) and a former Chair of the Board of Directors at the Japan Endocrine Society (JES). He has received numerous awards including the Edwin Von Baelt Award (1988), Medical Award (The Japan Medical Association, 2004), The Prize for Science and Technology, Research Category, The Commendation for Science and Technology (Minister of Education, Culture, Sports, Science, and Technology, Japan, 2008), the Takeda Medical Award (Takeda Science Foundation, 2009), and Medal with Purple Ribbon (2011).

John Pernow, MD PhD, FESC, is a Professor and Head of the Cardiology Unit, Department of Medicine, Karolinska Institutet, Stockholm, Sweden. He is also senior consultant of cardiology at the Department of Cardiology, Karolinska University Hospital. He is a member of the scientific council of the Swedish Heart and Lung Foundation. His research is focused on mechanisms behind and treatment targeting endothelial dysfunction with special emphasis on the role of endothelin in cardiovascular disease. John Pernow has been active in endothelin research for twenty years and published several papers regarding the pharmacology and pathophysiological role of endothelin in cardiovascular disease and complications to diabetes. An additional research area is protection against myocardial ischemia and reperfusion injury in experimental and clinical studies. Dr. Pernow is a Fellow of the *European Society of Cardiology*.

Jennifer S. Pollock, PhD, the Weiss Professor and Director of the University System of Georgia MD/Ph.D. Program at Georgia Regents University. She earned her Ph.D. in Biological Chemistry from The University of North Carolina at Chapel Hill and received post-doctoral training under the tutelage of Dr. Ferid Murad, 1998 Nobel Laureate in Physiology and Medicine. Subsequent to her post-doctoral training, she worked as a Drug Discovery Scientist at Abbott Laboratories before moving to GRU in 1995. Dr. Pollock's research is on the vascular and renal mechanisms of hypertension and diabetes focusing on the role of nitric oxide and endothelin in the relationship of stress on the vasculature, renal function, and immune responses. Her research is currently supported by two Program Project Grants from the National Institutes of Health. Dr. Pollock serves as a member of two AHA study sections and as an ad-hoc reviewer for NIH Program Project Grants. Dr. Pollock has mentored and trained over 60 undergraduate students, medical students, graduate students, post-doctoral fellows, clinical fellows, and junior faculty members in her tenure at GRU.

Sunu B. Raharjo, MD PhD, is a physician-scientist at the National Cardiovascular Center Harapan Kita/Department of Cardiology & Vascular Medicine, University of Indonesia. As a physician, he has been working as cardiologist and cardiac electrophysiologist, taking care of patients and teaching students on a daily basis; while as a scientist, he has been working with other scientists in his Cardiovascular Research Center to continue his research interests. Dr Raharjo's scientific work began with studies on the molecular aspects of endothelin converting enzyme family, and continued with translational researches using animal models. He performed these two research area when he was a Ph.D. student and a JSPS Post-doctoral Fellow at Kobe University, Kobe, Japan. There, he worked with Professor Emoto to apply pharmacological as well as genetic interventions to investigate the pathophysiological roles of endothelin (and bradykinin) system in animal models. Returning to Jakarta, Indonesia, Dr Raharjo resumed his cardiology training. Besides, his passion on research brought him to continue his basic and translational research in the clinical area. He has been working on the role of endothelin and bradykinin in metabolic syndrome and pulmonary hypertension.

Yoshihiko Saito, MD, FAHA, is a Professor of the First Department of Internal Medicine at Nara Medical University in Kashihara, Japan. His research has focused on roles of humoral factors in the cardiovascular system, especially heart failure. He demonstrated the usefulness of ANP infusion for the treatment of heart failure in 1987, only 3 years after ANP discovery. He is now the president of the

society of cardiovascular endocrinology and metabolism (CVEM), that is another scientific society focusing natriuretic peptides, adrenomedullin, ghrelin, endothelin and other cytokines. He held the international symposium on CVEM in Nara in 2010. Recently he has become specifically interested in the underling molecular mechanism of the cardiorenal connection.

Tsutomu Saji, MD PhD, Professor in Pediatrics, has worked in the field of pediatric cardiology for over 30 years. Since 1976, after the graduation from Toho University, Tokyo, he started off his career as a medical intern in the Department of Pediatrics, Toho University Hospital, then became an Assistant Professor (1986), an Associate Professor (1993), and then a Professor in Chief in Pediatrics (1997–present). He also has experience as an intern in Pediatric Cardiology, Heart Institute of Japan, Tokyo Women's Medical College, (1977–1978), and a research fellow in Children's Hospital of Los Angeles, University of Southern California, CA, U.S.A. (1987–1988). Dr. Saji has expertise in pulmonary hypertension, Kawasaki vasculitis, and myocarditis in children. He serves as FAHA, International Liaison of CVDY in AHA, FACC, FSCAI (the Society for Cardiac Angiography and Interventions), FJCC, the Secretary General of the Japanese Society of Ped Card, President of Japanese Pediatric Pulmonary Circulation Society, and holds numerous important roles in many different scientific societies and associations in Japan. He also participated in the Japanese Guideline Committees on PAH as a committee member. Dr. Saji reported several genetic studies on BMPR2, ALK1, ALK6, and Smad8 mutation, and negative HHV-8 in PAH.

Satoshi Sakai, MD PhD, is an Assistant Professor at the Department of Cardiovascular Medicine, University of Tsukuba in Tsukuba, Japan. After his training as a cardiologist in Tsukuba University Hospital, he started basic studies under the supervision of Professor Katsutoshi Goto and Professor Takashi Miyauchi in Tsukuba, Japan. He won the YIA of the 4th International Conference on Endothelin (ET-4, London) in 1995 for the pathophysiological role of myocardial endothelin system on the development of heart failure. He conducted his postdoctoral fellowship at Baylor College of Medicine in Houston, Texas; he moved back to Tsukuba and he leads his own laboratory as physician–scientist. Dr. Sakai's research deals with mechanisms and treatment of heart failure, pulmonary hypertension, and cardiopulmonary interrelations from the viewpoints not only of the endothelin system but also of the inflammation and metabolism. Dr. Sakai is a council member of Japanese Pharmacological Society, Japanese Heart Failure Society, and Japanese Pulmonary Circulation Society, and serves as a Secretary General of The Thirteenth International Conference on Endothelin (ET-13).

Shigetake Sasayama, MD, is an Emeritus Professor of Kyoto University and currently an honorary director of Uji Hospital in Kyoto. Dr. Sasayama was the Chief Director of the Japanese Circulation Society from 2000 to 2002. He has also served as the Chief Director of the Japanese Heart Failure Society and is the past president of the Japanese Society of Internal Medicine. From 2002 to 2005, he committed himself in the WHF as a board member representing Asia-Pacific region. He has a longstanding interest in physiological and biological mechanisms of the development of heart failure. He has also pioneered in an assessment of functional capacity of heart failure patients. Over the past 35 years, he has contributed more than 600 original articles to the cardiovascular literature and has published more than 50 invited articles or book chapters. He also serves as editor or on the editorial board of many major international and domestic journals in Cardiology, including the official journal of the American Heart Association, “Circulation”.

Toru Satoh, MD PhD

1982: Graduated from Keio University School of Medicine

1982–86: Internal Medicine Residency in Keio University School of Medicine

1986–89: Cardiology Fellow at Keio University School of Medicine

1989–92: Vice Chief in Cardiology in Ashikaga Red Cross Hospital

1992–94: Cardiologist at Kawasaki Medical School

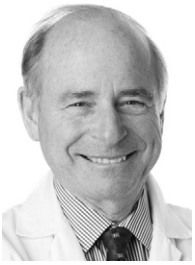
1994–99: Cardiologist at the division of Pulmonary Circulation in National Cardiovascular Center in Japan

1999–2008: Assistant Professor in Cardiology and Associated Professor in Medical Education at Keio University School of Medicine

2009–: Professor in Cardiology at Kyorin University School of Medicine

A leading doctor/ scientist in pulmonary hypertension in Japan. Member of the working group in the 5th world symposium on pulmonary hypertension.

Specialty: pulmonary hypertension, general cardiology, cardiac physical examination, exercise physiology, medical education.



Ernesto Schiffrin, MD PhD, FRSC, FRCPC, FACP, FAHA, is Physician-in-Chief of the Jewish General Hospital and holds a Canada Research Chair in Hypertension and Vascular Research. He is Professor and Vice-Chair (Research), Department of Medicine, McGill University. Dr. Schiffrin's research deals with mechanisms and treatment of high blood pressure, from molecules and cells to humans. He is author of more than 500 peer-reviewed publications, many book chapters and is editor of 2 published books, and 2 in preparation, on molecular and clinical aspects of vascular disease and hypertension. Dr. Schiffrin has been President of the Canadian Hypertension Society (1991–92), Chair of the High Blood Pressure Research Council of the American Heart Association (2002–2004), President of the InterAmerican Society of Hypertension (2005–2007) and President of the Quebec Hypertension Society (2009–2011). Dr. Schiffrin has been Vice-President (2010–2012) and is now President of the International Society of Hypertension (2012–2014). Dr. Schiffrin has been Associate Editor of Hypertension (AHA journal) since 2003. Dr. Schiffrin received the Senior Investigator Award of the Canadian Society of Internal Medicine in 2003 and the Distinguished Service Award of the Canadian Hypertension Society in 2004. He was elected Fellow of the Royal Society of Canada in 2006, and received the 2007 Irvine Page-Alva Bradley Lifetime Achievement Award of the High Blood Pressure Research Council of the American Heart Association and the 2010 Bjorn Folkow Award of the European Society of Hypertension. He was appointed Member of the Order of Canada (C.M.) in July 2010. He was awarded the 2011 Excellence Award in Hypertension Research of the American Heart Association, in September 2011. In 2013 he was awarded the Queen Elizabeth II Diamond Jubilee Medal.

Hiroaki Shimokawa, MD PhD, is a Professor of Cardiology at Tohoku University. Dr. Shimokawa is interested in the mechanisms for coronary atherosclerosis and vasospasm. He was the first to develop an animal model of coronary vasospasm and to demonstrate the involvement of Rho-kinase in the pathogenesis of the spasm and atherosclerosis both in animals and humans. Based on these findings, a specific Rho-kinase inhibitor has been developed and now in clinical trials for pulmonary hypertension. Dr. Shimokawa is also interested in endothelium-derived relaxing factors (EDRFs), especially endothelium-derived hyperpolarizing factor (EDHF). He has demonstrated the mechanism for endothelial dysfunction in atherosclerosis and the beneficial effect of fish oils and eicosapentaenoic acid on endothelial function. He has identified that endothelium-derived hydrogen peroxide (H_2O_2) is an EDHF in animals and humans, which notion is widely accepted. Dr. Shimokawa is also interested in applying the recent advances in biomedical engineering to vascular medicine. This includes the development of extracorporeal shock wave therapy for severe ischemic heart disease, and shock wave ablation system for arrhythmias. Finally, Dr. Shimokawa has been conducting several large-scale clinical trials on heart failure, ischemic heart disease, and pulmonary hypertension as principal investigators.

Francesca Spinella, PhD, graduated in Biology from the University of Catania in 1995, and obtained her Ph.D. degree in Neurobiology from the same University in 1999. As Ph.D. student she has worked in professor De Vellis' laboratory in Los Angeles, CA. She is currently a senior investigator at the Regina Elena National Cancer Institute of Rome where she has been working on endothelins since 2001. As a research fellow funded by the Italian Association for Cancer Research (AIRC; 2002–2004), she has been working in Dr. Anna Bagnato's laboratory in Rome studying the role of endothelins on the cell–cell interaction and communication on melanoma cells. Of particular interest is the analysis of signal transduction pathways through which ET-1 triggers cancer progression, with special attention on the role of ET-1 in promoting angiogenesis and tumor cell invasive behavior. In 2010 she was Principal Investigator in a project funded by AIRC in which she defined many critical activities of ET-1 in the induction of lymphangiogenesis. Currently, Dr Spinella's research is focused on the study of mechanism by which blocking ETBR could lead to tumor angiogenesis and lymphangiogenesis reduction, as potentially candidate in the inhibition of hematic- and lymphatic-driven metastatization.

Pierre-Louis Tharaux, MD PhD
INSERM Research Professor
Professional Experiences
2009–present: Inserm Research Professor and group leader, Inserm Paris Cardiovascular Research Center (PARCC), Hopital Europeen Georges Pompidou, Paris, France
Education and Training

- Medical studies at Faculte Necker-Enfants Malades- Universite Paris Descartes
- Interne des Hopitaux de Paris (1991) (resident and fellow)
- Fellowship in Nephrology (1991–1998). Nephrology: Board Certified (1998)
- Medical Doctorate from Universite Paris Descartes (1998)
- Ph.D. in Physiology & Pathophysiology from Universite Pierre & Marie Curie (2000)
- Curriculum in physiology and pathophysiology of sleep and cardiovascular disorders, Universite Paris Sud (2000)

Scientific interests: Pathophysiology of the Renal Circulation
Research in our laboratory is centered on the analysis of mouse vascular and renal pathophysiology, with a particular emphasis on genes implicated in signaling pathways. Our work covers three areas:

1- G-proteins coupled receptors (GPCRs) and tyrosine kinase receptors (TKR) signaling in podocytes in response to immune vasculitis withrapid-progressive glomerulonephritis (RPGN), diabetic nephropathy and in focal-segmental glomerulosclerosis(FSGS).
2- Signaling in podocytes and endothelial cells insickle cell nephropathy and vasculopathy and
3- Immunopathogenesis of sickle cell disease

Rita C. Tostes, PhD, is currently a Professor at the School of Medicine of Ribeirao Preto, University of São Paulo, a researcher at the National Council for Scientific and Technological Development (CNPq) and a member of the Foundation for Research Support of the State of São Paulo (FAPESP). He holds the degrees of B.Sc. in Pharmacy, University of São Paulo (1990), M.Sc. (1993) and Ph.D. (1996) in Biological Sciences (Pharmacology, School of Medicine of Ribeirao Preto, University of São Paulo). He had internships at the Albert Einstein College of Medicine. NY, University of Montreal, Clinical Research Institute of Montreal and Georgia Regents University (Medical College of Georgia), GA. He has scientific interests in the field of Cardiovascular Pharmacology and Physiology, focusing on the signaling pathways that control vascular function and its changes in hypertension, diabetes and erectile dysfunction. His specific interests are on the role of endothelin, aldosterone, cytokines and glycosylation with N-acetylglucosamine (O-GlcNAc) in vascular (dys)function.

Ivana Vaněčková, PhD, was born in Prague, Czech Republic. She graduated at the Charles University in 1987. She followed her postgraduate studies at the Institute of Physiology, Czech Academy of Sciences, where she obtained her Ph.D. Degree for the Thesis "Age-dependent changes in the function of isolated perfused kidney in various forms of experimental hypertension in the rat". She started as a Postdoctoral Fellow at the renal physiology laboratory at the Institute of Physiology, Prague. In 2001 she became the Assistant Research Professor at the Department of Experimental Medicine, Institute for Clinical and Experimental Medicine, Prague, where she was Head of the Department for Experimental Hypertension. As a Senior Investigator she continued her work in the Institute of Physiology AS CR, in the Department of Experimental Hypertension, where she is a Deputy Head. She is a member of American Society of Physiology, European Society of Hypertension and International Society of Hypertension. Most important topics of her work: mechanisms of contribution of renin–angiotensin system and endothelin systems to blood pressure regulation.

Nicolas Vignon-Zellweger, PhD, studied biology at the University Paul Sabatier in Toulouse, France and at the Georg August University in Gottingen, Germany as an ERASMUS Programme fellow. He obtained his master in Pharmacology and Pharmacochemistry from the University Louis Pasteur in Strasbourg, France in 2005. He joined the group of Professors Franz Theuring and Berthold Hocher within the Center for Cardiovascular Research of the Charite Medical School of Berlin, Germany as a fellow of the *Marie Curie Host Fellowship for Early Stage Research Training* program CARDIOVASC funded by the European Commission. He obtained his Ph.D. in natural sciences from the Free University of Berlin, Germany in 2010. He next moved to Japan and joined the research group of Professor Noriaki Emoto in the Department of Clinical Pharmacy at the Kobe Pharmaceutical University as a postdoctoral fellow. His research interests include the understanding of the role of the endothelin system in renal and cardiovascular diseases (heart failure, hypertension, diabetic nephropathy…). His publications mostly present basic research and pre-clinical studies using various genetically modified mice. Nicolas Vignon-Zellweger is Secretary General of the Thirteenth International Conference on Endothelin.

Bambang Widyantoro, MD PhD, graduated from University of Indonesia. He joined residency program in the Cardiology Department, University of Indonesia and has been working at the National Cardiovascular Center, Harapan Kita Hospital in Jakarta since 2003. During this period, he spent five years completing the research work of his Ph.D. thesis investigating the role of endothelin in cardiovascular medicine under the supervision of his mentor, Professor Noriaki Emoto of Kobe University, Japan. His current interests as a clinical cardiologist and researcher include hypertension, heart failure and diabetes-related cardiovascular disease.

Keiko Yamauchi-Takihara, MD PhD, is Presidential Aide and Director of Health Care Center in Osaka University, and the Professor of Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine. She worked in the laboratory of Dr. MJ Sole at The Center for Cardiovascular Research, The Toronto Hospital, as a postdoctoral fellow, where she began learning molecular cardiology. In 1992, she became Assistant Professor in the Department of Molecular Medicine, Osaka University Graduate School of Medicine, conducting research on signal transduction of cytokines and growth factors in cardiac myocytes. Current research interests include pathophysiology of heart failure, pulmonary circulation and cardiopulmonary interrelations.

Session Chairs and Invited Speakers

Matthias Barton, MD, FAHA, is a graduate of Hannover Medical School, Germany, and has been Professor of Cardiology at the University of Zurich in Switzerland since 2007. He received his clinical training in internal medicine, cardiology, and anesthesiology at Hannover Medical School and the University Hospitals of Basel, Bern, and Zurich. From 1999, he held a SCORE Career Development Award from the Swiss National Science Foundation to study novel factors involved in coronary artery disease and has a clinical interest in preventive cardiology. For the past 25 years, his research has focussed on atherosclerosis and the molecular mechanisms and endothelial factors contributing to coronary artery disease and cardiovascular risk. Dr. Barton is a Fellow of the American Heart Association and a member of the International Advisory Board of the *International Conferences on Endothelin*. He is Past Chair of the *Twelfth International Conference on Endothelin* (ET-12) held in Cambridge, UK, in 2011, and served as Guest Editor of the ET-12 Conference Proceedings, *Endothelin XII*.

Ariela Benigni, PhD, read Biological Science (Biol. Sci. D. Degree, University of Milan). She researched problems of anticancer and anti-thrombotic drugs in Milan and in Strasbourg before joining the Mario Negri Institute for Pharmacological Research in Bergamo, Italy, where she studied mediators of renal damage including the role of endothelin-1 in progressive renal injury (Ph.D. Degree, University of Maastricht). She is currently the Head of Department of Molecular Medicine and Scientific Secretary of Mario Negri Institute for Pharmacological Research of Bergamo. Dr. Benigni has contributed to more than 230 research publications. Her recent work has looked at therapies to halt renal disease progression or even induce regression of kidney lesions by multidrug approach with the interest to characterize cellular determinants of kidney repair after angiotensin II blockade. Dr. Benigni acted as Associate Editor of Kidney International, Journal of Nephrology and International Journal of Artificial Organs; actually she is Editor of Expert Opinion on Therapeutic Patents and PeerJ. She was consultant of WHO for a multicenter observational study on the predictive ability of angiogenic factors for Pre-eclampsia. For this latter study she has been appointed as Senior Fellow by the University of Oxford, Nuffield Department of Obstetrics & Gynaecology. She was the Chairman of the 10th International Conference on Endothelin (ET-10), held in Bergamo 2007. Dr. Benigni has recently been named to take part in the Visiting Committee of AERES – Agence d''Évaluation de la Recherche et de l''Enseignement Supèrieur – for the evaluation of scientists at the Hôpital Necker in Paris and she received the Merit Award of Bergamo City Hall for her contribution to science.

Anthony Davenport, PhD, directs the Human Receptor Research Group in the Clinical Pharmacology Unit, University of Cambridge focusing on understanding the role of G-protein coupled receptors, and their transmitters in the human cardiovascular system and how these are altered with disease. The role of endothelin in human pathophysiology, especially the development of atherosclerosis has been a major research interest since the discovery of the peptide in 1988. These include quantifying and imaging endothelin receptors in normal and diseased human tissue with subtype selective radioligands and antisera as well as positron emission tomography to non-invasively image endothelin receptors in vivo. Wider research interests are reflected through membership and co-vice chair of the International Union of Pharmacology Committee on Receptor Nomenclature and Drug Classification which maintains the GPCR and ion channel database, including latest parings of orphan receptors with their cognate ligands, published this year in *Pharmacological Reviews*. Dr Davenport is a Fellow of the British Pharmacological Society, member of the Editorial Board of the *British Journal of Pharmacology* (including Themed Reviews on *Endothelin 2011*), *Current Opinion in Pharmacology*

and editor of *Receptor Binding Techniques*. He is a member of the, International Advisory Board of the International Conferences on Endothelin and was co-chair of the Twelfth International Conference (ET-12) held in Cambridge UK in 2011.

Pedro d'Orléans-Juste, PhD, is a Professor of Pharmacology (1990–present) at Sherbrooke University Medical School, Quebec, Canada. He initiated his research endeavors on endothelins in 1988, as a post-doctoral fellow (supervisor, Sir John Vane, William Harvey Research Institute). Trained in cardiovascular pharmacology during his graduate studies, Dr D'Orléans-Juste was involved in the early report on the nicardipine insensitive–vascular properties of endothelins, in the conversion of big-endothelin-1 to endothelin-1 in vivo and more recently in the first report on the pivotal contribution of chymase in the production of endothelin-1 in vivo. Dr D'Orléans-Juste, among the 100 most cited pharmacologists worldwide, lists 250 publications and currently supervises 5 MSc and Ph.D. students on a CIHR-funded program on the role of mast cell proteases in the genesis of endothelin-1. Dr. d'Orléans-Juste is Past Chair of the *Sixth International Conference on Endothelin* (ET-6) and the *Eleventh International Conference on Endothelin* (ET-11), both held in Montréal in 1999 and 2009, respectively, and is a member of the International Advisory Board of the *International Conferences on Endothelin*.

Donald E. Kohan, MD PhD, FASN, is a Professor of Medicine and Physiology at the University of Utah Health Sciences Center in Salt Lake City, UT. His research for over two decades has focused on kidney regulation of blood pressure and salt balance. He is specifically interested in the role of endothelins and nitric oxide in the control of renal sodium and water transport and blood pressure, and uses multiple transgenic and gene-targeted models. He is also involved in clinical studies using endothelin receptor antagonists to treat patients with chronic kidney disease. Dr. Kohan is Past Chair of the *Nineth International Conference on Endothelin* (ET-9), held in 2005 in Park City, UT, USA. Dr. Kohan is a Fellow of the American Society of Nephrology and a member of the International Advisory Board of the *International Conferences on Endothelin*.

David M. Pollock, PhD, earned his Ph.D. degree in Physiology from the University of Cincinnati in 1983. He completed a post-doctoral fellowship at the University of North Carolina at Chapel Hill. He then spent two years as a Senior Scientist at the Institute for Circadian Physiology at Harvard University in Boston before taking a position in the Drug Discovery Division of Abbott Laboratories in Chicago. In 1995, he accepted a faculty position in Vascular Biology Center at the Medical College of Georgia (now known as Georgia Regents University) where he has risen to the rank of Regents' Professor. In 2010, he became the founding chief of the Section of Experimental Medicine. He also holds positions in the Departments of Physiology, and Pharmacology & Toxicology. Dr. Pollock is a fellow of the American Heart Association and the American Society of Nephrology and currently serves as Program Director of a pre-doctoral training grant by the National Heart Lung and Blood Institute. Dr. Pollock was recently elected to become President of the American Physiological Society in 2014. He recently completed a term as Associate Editor for the American Journal of Physiology: Regulatory, Integrative and Comparative Physiology and Vascular Pharmacology and is now serving as Editor-in-Chief of Comprehensive Physiology. He is also a founding member of the International Advisory Board on Endothelin who organize the bi-annual International Conferences on Endothelin. Dr. Pollock's research is related to the control of sodium excretion and the role of the kidney in blood pressure regulation. His long-standing interest in natriuretic factors has led to his active involvement in elucidating the actions of endothelin. His research has helped to elucidate the opposing actions of endothelin A versus endothelin B receptors in both renal vasculature and the tubular system. Recent studies from his lab have suggested that defects in the endothelin B receptor system contribute to salt-dependent hypertension. His research has been supported for many years by several grants from the National Heart Lung and Blood Institute and the American Heart Association. He currently serves as the Principle Investigator on a Program Project Grant on Endothelin in the Kidney.

David J. Webb, MD, DSc, FRCP, FRSE, FMedSci, is Professor of Therapeutics and Clinical Pharmacology in the BHF Centre of Research Excellence at the University of Edinburgh, where he established its Centre for Cardiovascular Science, and consultant physician at the Royal Infirmary of Edinburgh. He is recognized internationally for his work on endothelial function and arterial stiffness, much of which focuses on the endothelin system, and on the investigation and effective treatment of patients with complex hypertension and chronic kidney disease. His work is mainly translational and he provides leadership to two new UK clinical Ph.D. training initiatives in translational medicine and therapeutics (TMAT) based in Scotland, funded by the Wellcome Trust and Medical Research Council. He is a Fellow of the Royal Society of Edinburgh and UK Academy of Medical Sciences, and was awarded the SKB Silver and Lilly Gold Medals from the British Pharmacological Society for his research and for contributions to pharmacology, respectively. Dr. Webb was Chair of the Seventh International Conference on Endothelin (ET-7), held at Edinburgh in 2001. He is a member of the International Advisory Board of the International Conferences on Endothelin.

Jun Yamashita, MD PhD, is an Associate Professor at the Center for iPS Cell Research and Application (CIRA) at Kyoto Univerity. He graduated from Kyoto University School of Medicine in 1990, entered Kyoto University Graduate School of Medicine in 1993, specializing in physiology. He gained a Ph.D. in medicine in 1998 and became a special researcher at the Japan Society for the Promotion of Science. He was an Assistant Professor and then a Associate Professor in the Department of Molecular Genetics at Kyoto University Graduate School of Medicine, and in 2003 he was appointed as Associate Professor in the Department of Stem Cell Differentiation at Kyoto University Institute for Frontier Medical Sciences. In 2008, concurrently he was appointed as Associate Professor at the Center for iPS Cell Research and Application (CiRA) at Kyoto University Institute for Cell-Material Sciences.